APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/870,366	05/30/2001	Sudheer Sirivara	10559-477001/ P11156	7426

			EXAMINER
20985	7590	06/02/2005	KADING, JOSHUA A

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ART UNIT	PAPER NUMBER
2661	

DATE MAILED: 06/02/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>18 January 2005</u>.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
   closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-21</u> is/are pending in the application.

   4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1-21</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

   Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

   Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

   a)☐ All   b)☐ Some * c)☐ None of:

   1.☐ Certified copies of the priority documents have been received.

   2.☐ Certified copies of the priority documents have been received in Application No. _____.

   3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
      application from the International Bureau (PCT Rule 17.2(a)).

   * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☐ Notice of References Cited (PTO-892)
2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .
5)☐ Notice of Informal Patent Application (PTO-152)
6)☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

1.   The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly
> claiming the subject matter which the applicant regards as his invention.

2.   Claims 4 and 17 are rejected under 35 U.S.C. 112, second paragraph, as being

indefinite for failing to particularly point out and distinctly claim the subject matter which

applicant regards as the invention.

Claim 4, line 3 and claim 17, line 3 state, "said feature of said media stream."

However, it is not clear which feature "said feature" is referring back to. Parent claims 2

and 15 each disclose, "said reference data characterizes a feature of said media

stream" and "said altered data characterizes a feature of said media stream."

Claim Rejections - 35 USC § 102

3.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by
> another filed in the United States before the invention by the applicant for patent or (2) a patent
> granted on an application for patent by another filed in the United States before the invention by the
> applicant for patent, except that an international application filed under the treaty defined in section
> 351(a) shall have the effects for purposes of this subsection of an application filed in the United States
> only if the international application designated the United States and was published under Article 21(2)
> of such treaty in the English language.

4.   Claims 1, 2, 4, 5, 6, 9, 14, 15, 17, 18, and 19 are rejected under 35 U.S.C. 102(e)

as being anticipated by U.S. Patent 6,363,053 B1, Schuster et al. (Schuster ('053)).

Regarding claims 1, 9, and 14, Schuster ('053) discloses a method and a

computer program to implement said method (*col. 9, lines 55-58*), and "a system

comprising: a first feature extractor for generating reference data characterizing a media

stream (*col. 9, line 66 where the source data is generated by an equivalent of a first*

feature extractor); a second feature extractor generating altered data characterizing said

media stream after said media stream has traversed a channel that includes a network

(*col. 9, lines 67-col. 1, line 1 where the data is received at a receiver or an equivalent to*

a second feature extractor and since the data has traversed the network, it is now

altered data); an analyzer for comparing said reference data and said altered data to

generate a transmission metric indicative a quality of service (*col. 10, lines 1-9 where*

the data is analyzed as in figure 7, element 334 by comparing the altered data against

the original, this is specifically stated in col. 10, lines 7-9)."

Regarding claims 2 and 15, Schuster ('053) further discloses, "wherein said

reference data characterizes a feature of said media stream (*col. 10, lines 4-9 where*

the features can include the packet loss, throughput, jitter, etc.); and said altered data

characterizes a feature of said media stream after said media stream has traversed said

channel (*col. 10, lines 1-9 where the features can include the packet loss, throughput,*

jitter, etc.)."

Since claims 4 and 17 are vague with regard to the term "said feature," it will be

assumed that the foregoing rejection will apply equally to either "feature" as initially

disclosed in claims 2 and 15.

Regarding claims 4 and 17, Schuster ('053) further discloses, "determining a

quality of service of said channel comprises comparing said reference data and said

altered data for said feature of said media stream (*col. 10, lines 1-9*)."

Regarding claims 5 and 18, Schuster ('053) further discloses, "obtaining network

statistics associated with transmission on said channel (*col. 1, lines 34-38 and 47-52*

where the SLA, which contains the overall network statistics such as delay, jitter, etc.);

correlating said network statistics with said altered data (*col. 10, lines 23-27*)."

Regarding claims 6 and 19, Schuster ('053) further discloses, "selecting said

network statistics from the group consisting of jitter packet loss, and packet latency (*col.*

1, lines 34-38 and 47-52)."

Claim Rejections - 35 USC § 103

5.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

6.   Claims 3, 13, and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable

over Schuster et al. ('053) in view of U.S. Patent 5,912,701, Morton, Jr. (Morton).

Regarding claims 3, 13, and 16, Schuster ('053) lacks what Morton discloses,

"wherein obtaining at least one of said reference and said altered data comprises

applying a Sarnoff JND algorithm or an ANSI T1.801.03 algorithm (*col. 5, lines 38-42*)."

It would have been obvious to one with ordinary skill in the art at the time of invention to

include the ANSI T1.801.03 algorithm for the purpose of obtaining the reference data or

altered data. The motivation for obtaining the reference data is to use it to derive a

comparison of the current status of the network (*Schuster ('053), figure 4, elements 206

and 208*).

7.   Claims 7, 8, 20, and 21 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Schuster et al. ('053) in view of U.S. Patent 6,360,271 B1, Schuster

et al. (Schuster ('271)).

Regarding claims 7 and 20, Schuster ('053) lacks what Schuster ('271) discloses,

"an encoder for creating an encoded representation of said media stream (*figure 2,

element 24*); a decoder for recovering said media stream from said encoded

representation (*figure 2, element 34*); and a computer network between said encoder

and said decoder for transmitting said encoded representation between said encoder

and said decoder (*figure 2, element 18*)." It would have been obvious to one with

ordinary skill in the art at the time of invention to include the encoder, decoder, and

computer network for the purpose of compressing the data before it is transmitted across the network (*Schuster ('271), col. 8, lines 66-67*). The motivation for compressing data before it is transmitted is to make optimal use of the network bandwidth by allowing more compressed data to be transmitted than uncompressed data.

Regarding claims 8 and 21, Schuster ('053) further discloses "passing said decoded media stream through a feature extractor to extract said reference data (*figure 7, element 332 which extracts data (e.g. decoded) from the network as read in col. 12, lines 44-47*)." However, Schuster ('053) lacks what Schuster ('271) discloses, "passing said media stream through an encoder to generate an encoded signal (*figure 2, element 24; col. 2, lines 64-col. 3, lines 1-4*); passing said encoded signal through a decoder to generate a decoded media stream (*figure 2, element 34; col. 3, lines 9-12*)." It would have been obvious to one with ordinary skill in the art at the time of invention to include the encoding and decoding for the purpose of compressing the data before it is transmitted across the network (*Schuster ('271), col. 8, lines 66-67*). The motivation for compressing data before it is transmitted is to make optimal use of the network bandwidth by allowing more compressed data to be transmitted than uncompressed data.

Claims 10-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schuster et al. ('053) in view of U.S. Patent 6,701,342 B1, Bartz et al. (Bartz).

Regarding claim 10, Schuster ('053) lacks what Bartz discloses, "comprising a correlator in communication with said analyzer, said correlator being configured correlate network statistics associated with said channel with said transmission metric (*col. 13, lines 37-63 where the QoS data and the SLA data corresponding to network statistics are correlated for a given instant or period of time*)." It would have been obvious to one with ordinary skill in the art at the time of invention to include the correlating for the purpose of determining end-to-end performance and availability of resources (*Bartz, col. 3, lines 14-19*). The motivation for determining end-to-end performance and availability of resources is to ensure that there are enough resources in the network to reliably transmit and receive data.

Regarding claim 11, Bartz lacks what Schuster ('053) further discloses, "a network monitor in communication with said correlator, said network monitor being configured to collect said network statistics (*figure 7, element 340*)." It would have been obvious to one with ordinary skill in the art at the time of invention to include the network monitor for the same reasons and motivation as in claim 10.

Regarding claim 12, both Schuster ('053) and Bartz further disclose "statistics selected from the group consisting of jitter packet loss, and packet latency (*Schuster ('053), col. 1, lines 34-38 and 47-52; Bartz, col. 5, lines 50-57*)."

Response to Arguments

8.   Applicant's arguments, see REMARKS, page 8, second paragraph, filed 18

January 2005, with respect to the objections to claims 4 and 17 have been fully

considered and are persuasive. The objections of claims 4 and 17 have been

withdrawn.

9.   Applicant's arguments, see REMARKS, page 8, fourth paragraph, filed 18

January 2005, with respect to the 35 U.S.C. 112, second paragraph rejections of claims

7 and 20 have been fully considered and are persuasive. The 35 U.S.C. 112, second

paragraph rejections of claims 7 and 20 have been withdrawn.

10.   Applicant's arguments, see REMARKS, page 8, last paragraph, filed 18 January

2005, with respect to the rejections of claims 1, 2, 4-7, 9, and 14 under 35 U.S.C. 102(e)

have been fully considered and are persuasive. Therefore, the rejection has been

withdrawn. However, upon further consideration, a new ground(s) of rejection is made

in view of further reading of the prior art and in light of applicant's remarks concerning

the claimed invention.

11.   Applicant's arguments filed 18 have been fully considered but they are not

persuasive.

        Although it has been acknowledged that the cited portion of Schuster ('053) did

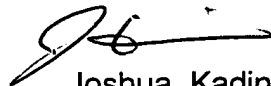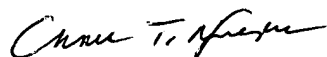not read on applicant's invention as claimed, applicant is mistaken in the

characterization that Schuster ('053) does not compare the reference data and altered data. Noted in the rejection above, Schuster ('053) explicitly discloses the claimed invention, "packet loss, throughput, jitter (i.e. QoS parameters)...may be measured by comparing what traffic was transmitted (the reference data) to what traffic was received (the altered data)."

12.   Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joshua Kading whose telephone number is (571) 272-3070. The examiner can normally be reached on M-F: 8:30AM-5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chau Nguyen can be reached on (571) 272-3126. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Joshua Kading
Examiner
Art Unit 2661

May 24, 2005   CHAU NGUYEN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600